

## 136-138 20W 5700K specific configuration

Refl downl matt | Ø228mm | black | 3-CCT | 13~25W | EU plug

## Introduction

### Purpose of this Document

This document provides information for 136-138 20W 5700K. During measurement, the product is used in a different mode where output power, colour temperature and/or beam angle are changed from factory standard. These adjustments can be made without altering the product and are designed to be set by the installer. In most cases, the options are set through switches on the product.

### Results

Total input power	19.0 W
Correlated Colour Temperature	5825 K
Total lumen output	2459 lm
Efficiency	130 lm/W

## Electrical measurement details

### Input Power

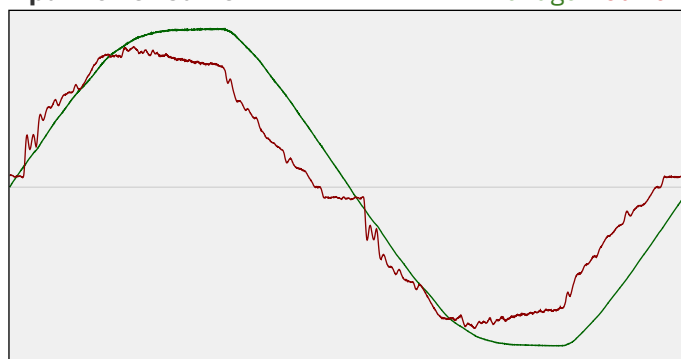
RMS Input voltage feed. $V_{RMS}$	229 V
RMS Input current feed. $I_{RMS}$	0.087 A
Total input power	19.0 W

Frequency of input power	50 Hz
Power factor	0.96
Displacement power factor	0.97

Total harmonic distortion of the current	10.89%
Total harmonic distortion of the voltage	2.93%

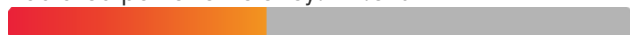
### Input Power Curve

Voltage - Current



### Efficiency

Radiated power efficiency: 41.6%



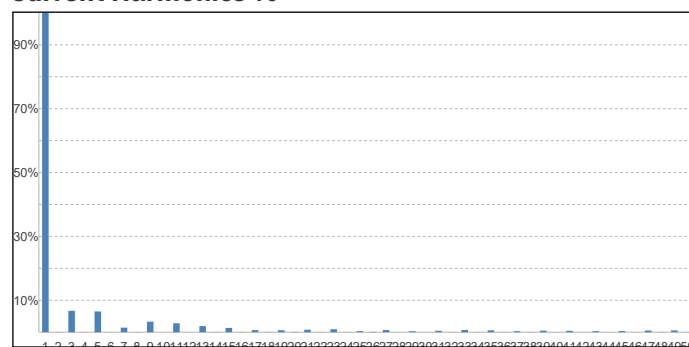
Lumen efficiency: 130 lm/W



### Harmonics

3rd Harmonic	6.69%
5th Harmonic	6.5%
7th Harmonic	1.42%
9th Harmonic	3.3%
11th Harmonic	2.8%

### Current Harmonics %



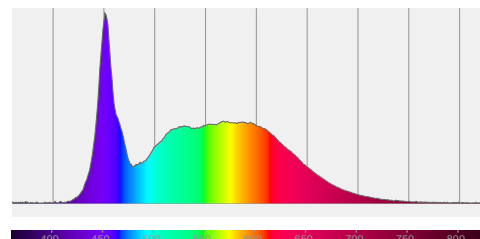
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### Colour measurement details

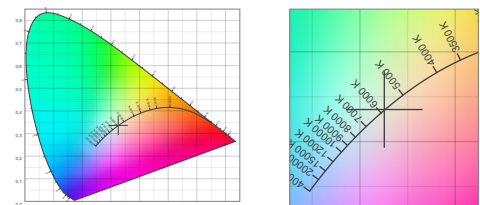
Total lumen output 2459 lm  
 Correlated Colour Temperature 5825 K  
 Colour coordinates CIE 1931 (x;y) = (0.326;0.336)  
 Colour deviation from BBL Duv = 0.0004

TM30-18 Colour Fidelity Index  $R_f$  84.5  
 TM30-18 Colour Gamut Index  $R_g$  96.5  
 Colour Rendering Index (Ra) CRI 85.9  
 Colour Rendering Index. (red component)  $R_9 = 20.7$

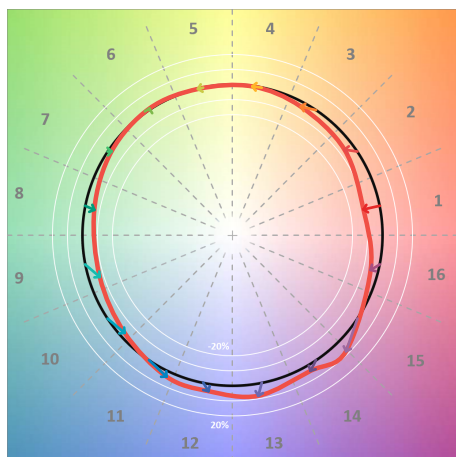
Colour Quality Scale CQS = 82.4  
 Television Lighting Consistency Index TLCI = 78



Relative spectral power distribution



### TM30 details

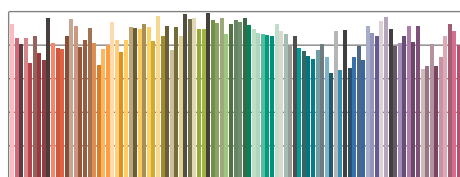


TM30 Colour vectors per hue bin

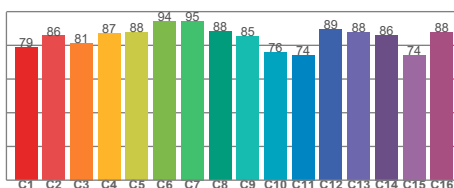


TM30 Colour distortion

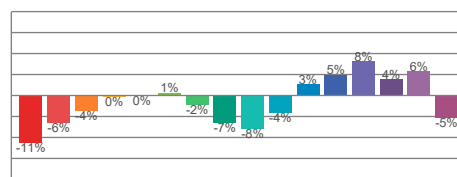
Hue Bin	$R_f$	Shifts (%)	
		Chroma	Hue
C1	79	-11%	0%
C2	86	-6%	6%
C3	81	-4%	10%
C4	87	0%	6%
C5	88	0%	4%
C6	94	1%	-1%
C7	95	-2%	-2%
C8	88	-7%	1%
C9	85	-8%	10%
C10	76	-4%	14%
C11	74	3%	16%
C12	89	5%	5%
C13	88	8%	-4%
C14	86	4%	-7%
C15	74	6%	-22%
C16	88	-5%	-5%



TM30-18  $R_f$ -values per reference colour

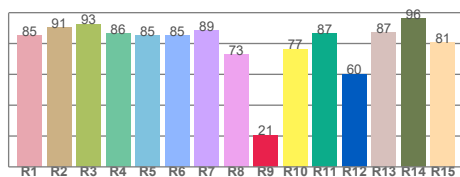


TM30-18  $R_f$ -values per hue bin

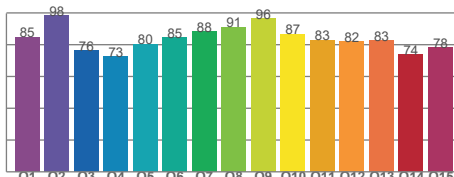


TM30 Chroma shift

### Colour Quality details



Colour Rendering Index



Colour Quality Scale